MISSILE DEFENSE AGENCY

Fact Sheet

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Ground-Based Midcourse Defense

The mission of the Ground-Based Midcourse Defense (GMD) element of the Ballistic Missile Defense System (BMDS) is to defend the nation, our deployed military forces, and our friends and allies against a limited attack by intermediate and long-range ballistic missiles.

Overview

- Uses multiple sensors, communications systems, fire control capabilities, and ground-based interceptors that are capable of detecting, tracking, and destroying intermediate- and long-range ballistic missiles during the midcourse phase of flight.
- The interceptor kill vehicle uses the kinetic energy from a direct hit on the incoming reentry vehicle (RV) to destroy it. The Exo-atmospheric Kill Vehicle (EKV) is a sensor-propulsion package that collides with the target at a closing speed of approximately 15,000 miles per hour. This "hit-to-kill" technology has been proven in a number of flight tests, including three tests using the operationally configured Ground-Based Interceptor (GBI).

Details

Ground-Based Midcourse Defense is composed of two main components: ground-based interceptors, and ground systems.

- **Ground-Based Interceptor:** A GBI is made up of a three-stage, solid fuel booster and an exoatmospheric kill vehicle. When launched, the booster missile carries the kill vehicle toward the target's predicted location in space. Once released from the booster, the 230-pound EKV uses data received in-flight from ground-based radars and its own on-board sensors to close with and destroy the target warhead well outside Earth's atmosphere using only the kinetic force of the direct collision to destroy the target warhead.
- **Ground Systems:** This is the backbone of the Ground-Based Midcourse Defense element. It provides the interceptor launch facilities and connects all hardware, software and communications systems necessary for planning, directing and controlling the Ground-Based Midcourse Defense element.

Deployment

- Interceptor missiles are currently emplaced at Fort Greely, Alaska and Vandenberg Air Force Base, California. A total of 30 are planned for deployment at Fort Greely and Vandenberg by 2010.
- Ground-Based Midcourse Defense fire control centers have been established in Colorado and Alaska.